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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,298	12/09/2004	Kentaro Yamauchi	262637US3XPCT	8627

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EXAMINER	
HAMO, PATRICK	
ART UNIT	PAPER NUMBER
3746	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/23/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/516,298	YAMAUCHI ET AL.	
	Examiner	Art Unit	
	Patrick Hamo	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 December 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09 Dec 04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admission of prior art in view of Noah et al., 5,782,615.

The applicant admits as prior art (p. 1, l. 9 – p. 3, l. 14) an oil pump with an actuating chamber, a suction port, a delivery port, a suction passage for supplying oil to the suction port, a delivery passage to which the oil is delivered from the delivery port, a bypass passage for communicating with the delivery passage and the suction passage, and a rotor for actuating a pump action. Rotation of the rotor causes a pump action which sucks oil in the suction passage from the suction port so as to supply the oil to the delivery passage by way of the delivery port. When a flow amount of the oil is excessive in the delivery passage, a flow control valve sends the excessive oil in the delivery passage to the suction passage as a returning flow of oil by way of the bypass passage, thereby supplying the oil suitably from the delivery passage to a hydraulic apparatus. When the excessive oil returns from the delivery passage exhibiting a high pressure to the suction passage exhibiting a low pressure by way of the bypass passage, the oil returns at a considerably high speed.

The applicant does not admit as prior art the following claimed limitations: said corrosion-proof member has a discontinuous shape in a circumferrencial direction of a center line in a cross section which intersects said center line of one of said suction passage and said bypass passage at right angles, and has one of a V-shape, a U-shape, and a C-shape in said cross section, said corrosion-proof member has a spring force for being urged in an opening direction thereof in said cross section and said corrosion-proof member is fixed by said spring force in at least said one of said suction passage and said bypass passage, said base is formed of aluminum alloy, and said corrosion-proof member is formed of material which is higher than aluminum alloy in average hardness and corrosion resistance, at least a portion being in contact with oil in said corrosion-proof member is mainly formed of ferrous material selected from a group of alloy steel and carbon steel, or ceramic material, said suction passage has a long sideways shape with a long diameter and a short diameter in said cross section, and said corrosion-proof member is disposed in the side of said long diameter of said suction passage, and said corrosion-proof member is set to be flat with an inner wall surface at which said corrosion-proof member is disposed in said suction passage and said bypass passage.

However, Noah teaches a pump assembly with an erosion-proof tubular bypass liner 112 that has a discontinuity 180 in a circumferential direction through a center line crossing an inlet passage 104 at a right angle and has a C-shape cross section (fig. 7), spring-loaded in to the inlet passage by means of the slot 180 and then fixed therein (Abstract, ll. 16-22), with a base or main section 26 formed of an aluminum casting (col.

2, ll. 13-14), and the erosion-proof liner is made of steel (col. 5, ll. 58-59) which is harder than aluminum, and it is obvious from its use as an erosion-proof liner that it is more corrosion resistant, and the erosion-proof liner is set flat against the inner wall surface of the inlet passage (fig. 3). Noah teaches that the tubular liner helps protect the housing against erosion from the relatively high pressure bypassed fluid and inlet fluid in the pump unit and limiting movement of the liner in response to fluid flows that normally encourage movement (col. 1, ll. 31-37).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the admitted prior art with the tubular bypass liner of Noah in order to limit the movement of the liner in response to fluid flows that tend to move the liner relative to the housing.

In regards to the claimed limitations that said suction passage has a long sideways shape with a long diameter and a short diameter in said cross section, and said corrosion-proof member is disposed in the side of said long diameter of said suction passage, this constitutes a change in shape that fails to patentably distinguish over the prior art absent persuasive evidence that the particular configuration is significant. See MPEP §2144.04(4)(b).

3. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above in view of Teubler et al., 4,575,314.

The references as applied to claim 1 above teach all of the limitations substantially as claimed except for the following: said flow control valve has a spool for moving in said delivery passage depending on a pressure of said delivery passage, and

said base has a balancing concavity into which a part of said returning flow of oil flows from said delivery passage for increasing balance of said spool, wherein said bypass passage communicates with a portion which faces to said bypass passage in said delivery passage, and wherein a second corrosion-proof member having corrosion resistance is disposed at a position for facing to a part of said returning flow of oil, said second corrosion-proof member has a cup-shape or a plate-shape, said second corrosion-proof member has an air vent way, said second corrosion-proof member is formed of material being higher than aluminum alloy in average hardness and corrosion resistance, and at least a part being in contact with oil in said second corrosion-proof member is mainly formed of ferrous material selected from a group of alloy steel and carbon steel, or ceramic material.

However, Teubler teaches a rotary vane pump for power steering including a control valve 40 with a spool 41 that moves into the delivery passage 19a,b and a valving chamber 47 into which oil flows to increase the balance of the spool (col. 2, l. 67 – col. 3, l. 6), the feed passage 17a,b and discharge passage 19a,b communicating at the spool (figs. 3, 4), and a cup-shaped (fig. 3, 4) erosion-proof insert 51 is positioned to face the returning flow 50, with an air vent way 19a, the erosion-proof member being formed of brass, bronze, or steel which are of higher hardness than aluminum and is obviously of higher corrosion resistance (col. 3, ll. 25-28). Teubler teaches that to place the erosion-proof insert in this particular position substantially eliminates the danger of erosion (col. 1, ll. 36-41).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the references as applied to claim 1 above with the control valve and erosion-proof insert of Tuebler in order to further eliminate the danger of erosion.

Conclusion

Applicant is duly reminded that a complete response must satisfy the requirements of 37 C.F. R. 1.111, including: "The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references. A general allegation that the claims 'define a patentable invention' without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirements of this section. Moreover, 'The prompt development of a clear Issue requires that the replies of the applicant meet the objections to and rejections of the claims.'" Applicant should also specifically point out the support for any amendments made to the disclosure. See MPEP 2163.06 II(A), MPEP 2163.06 and MPEP 714.02. The "disclosure" includes the claims, the specification and the drawings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Hamo whose telephone number is 571-272-3492. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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